

## REMARKS

Claims 1-28, 96, 104-105, 113-115, and 124 are pending in the application.

### **Specification**

Paragraph [0017] (published paragraph [0015]) of Applicants' specification has been amended to comply with the requirement in the Office Action. See Office Action, page 2. Applicants believe no new subject matter has been added by way of their amendment.

### **Rejections under 35 U.S.C. § 103**

In the Office Action, the Examiner has rejected claims 1-10, 14-19, 24-26, 28, 104, 105, 113-115, and 124 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,970,479 to Shepherd ("Shepherd") in view of U.S. Patent Application Publication No. 2002/0042770 to Slyke et al ("Slyke") in further view of U.S. Patent No. 7,205,755 to Muralidhar ("Muralidhar"). Office Action, page 3. Applicants respectfully traverse the rejection.

In the Office Action, the Examiner has rejected claims 11-13 under 35 U.S.C. § 103(a) as being unpatentable over Shepherd in view of Slyke in view of Muralidhar in further view of U.S. Patent No. 6,321,212 to Lange ("Lange"). Office Action, page 10. Applicants respectfully traverse the rejection.

In the Office Action, the Examiner has rejected claims 20-21 under 35 U.S.C. § 103(a) as being unpatentable over Shepherd in view of Slyke in view of Muralidhar in further view of Huang, Robert D. and Hans R. Stoll, "Is it time to split the S&P 500 futures contract?", Financial Analysts Journal, 54.1 (1998): 23-25 ("Huang"). Office Action, page 12. Applicants respectfully traverse the rejection.

In the Office Action, the Examiner has rejected claims 22-23 under 35 U.S.C. § 103(a) as being unpatentable over Shepherd in view of Slyke in view of Muralidhar in further view of Burghardt, Galen, George Panos, and Fred Sturm, "Hedging and trading with Eurodollar stacks, packs, and bundles", Derivatives Quarterly, 1 July 2000 pg. 50 ("Burghardt"). Office Action, page 13. Applicants respectfully traverse the rejection.

In the Office Action, the Examiner has rejected claim 27 under 35 U.S.C. § 103(a) as being unpatentable over Shepherd in view of Slyke in view of Muralidhar in further view of U.S. Patent No. 6,993,504 to Friesen et al. ("Friesen"). Office Action, page 14. Applicants respectfully traverse the rejection.

In the Office Action, the Examiner has rejected claim 96 under 35 U.S.C. § 103(a) as being unpatentable over Shepherd in view of Slyke in view of Muralidhar in further view of U.S. Patent No. 5,375,055 to Togher ("Togher"). Office Action, page 14. Applicants respectfully traverse the rejection.

In response to the Examiner's rejections, Applicants' independent claims recite (emphasis added):

"establishing, on said trading system, a plurality of separate contracts within contract bundles, each contract bundle paying off an aggregate fixed monetary sum at maturity, the aggregate fixed monetary sum at maturity known when the contract bundles are established, and wherein each contract bundle comprises at least two separate contracts" (independent claim 1),

and

"[a] computer network-based contract trading system, including a communications interface, a plurality of processing modules for formation, sale, resale and settlement of separate contracts within contract bundles, each of said contract bundles comprising at least two separate contracts wherein each contract bundle pays

off an aggregate fixed monetary sum at maturity, the aggregate fixed monetary sum at maturity known upon the formation of the contract bundles," (independent claim 28).

Applicants' claims are supported by Applicants' published specification. Specifically, referring to Applicants' published specification (emphasis added):

[0037] The computer-network based system enables transactions relating to bundles of futures contracts, where each bundle includes at least two futures contracts, each of which corresponds to one of at least two future possible outcomes of a phenomenon at a time of maturity of the contracts. The futures contract bundles are defined to pay an aggregate fixed sum at maturity and each of constituent futures contracts pay the fixed sum at maturity upon the happening of the future possible outcome of the phenomenon associated with that particular risk management contract. Conversely, each of the risk management contracts pay a zero sum at maturity upon the non-happening of the future possible outcome of the phenomenon associated with that specific risk management contract.

[0062] A "contract bundle" is a collection of contracts whose aggregate payoff at date T in any state of nature is \$10. For instance, suppose  $S=\{s_1, s_2, s_3, s_4, s_5\}$  is a complete set of possible states for a given event. Then a bundle might consist of the set  $\{A, B, C, D, E\}$  of 5 contracts. In this example:

[0063] At time T, contract #1 (A) pays off \$10 if state  $s_1$  occurs, and \$0 otherwise.

[0064] At time T, contract #2 (B) pays off \$10 if state  $s_2$  occurs, and \$0 otherwise.

[0065] At time T, contract #3 (C) pays off \$10 if state  $s_3$  occurs, and \$0 otherwise.

[0066] At time T, contract #4 (D) pays off \$10 if state  $s_4$  occurs, and \$0 otherwise.

[0067] At time T, contract #5 (E) pays off \$10 if state  $s_5$  occurs, and \$0 otherwise.

[0068] Because the possible states for a given event {s1, s2, s3, s4, s5} are mutually exclusive, and because the set S includes all possible outcomes, one (but only one) of the states will be achieved at time T. Thus, regardless of which one of the states is achieved at time T, the aggregate value of the contract bundle will always be \$10.

Further, Applicants teach “an event contract may pay off either \$10 or \$0 depending on the outcome of a specified event. If a particular criteria is met (i.e. a particular outcome occurs), then the claim pays off \$10.” Published Specification Paragraph No. 0055 (emphasis added). Thus, one contract in Applicants’ exemplary contract bundle is for the occurrence of the event and the other contract in the exemplary contract bundle is for the non-occurrence of the event. Accordingly, in this example, Applicants teach paying off an aggregate fixed monetary sum at maturity of \$0 + \$10 = \$10.

The Examiner asserts that Muralidhar “discloses derivatives (contract bundles) and paying off an aggregate fixed sum at maturity, the fixed sum known when contract bundles are established (providing a pre-specified payoff of a fixed sum at maturity, col. 2 line 64 to col. 3 line 14; col. 4 lines 31-34; col. 6 lines 45-53).” Office Action, page 5. Accordingly, the Examiner has rejected Applicants’ independent claims 1 and 28, and dependent claims 2-10, 14-19, 24-26, 104-105, 113-115, and 124 under 35 U.S.C. § 103(a).

Muralidhar does not disclose contract bundles paying off an aggregate fixed monetary sum at maturity, the aggregate fixed monetary sum known when contract bundles are established. Instead, Muralidhar teaches paying off “the right to purchase tickets at a predetermined price.” Muralidhar, col. 6 lines 45-53 (emphasis added). Thus, Muralidhar teaches paying off an option to purchase tickets at maturity. The recipient of the option may or may not exercise the option. If the recipient of the option exercises the option, the recipient spends additional money to purchase the tickets. If the recipient does not exercise the option, the recipient spends no additional money to

purchase the tickets and is out the cost of purchasing the option. In no case is the recipient of Muralidhar receiving an aggregate fixed monetary sum at maturity.

Applicants set forth in entirety the Examiner's citations and again respectfully invite the Examiner to specify where in the following citations Muralidhar discloses derivatives (contract bundles) paying off an aggregate fixed monetary sum at maturity, the aggregate fixed monetary sum known when the contract bundles are established:

Muralidhar, col. 6 lines 45-53:

In accordance with the invention, an option is preferably an event-strike option with the following characteristics: the individual purchaser of the option acquires the right to purchase tickets at a predetermined price (or the payoff) from the seller of the option, should the competitor on whom they chose the option advance to a pre-specified higher round of competition (or the strike event). The maturity of the option is the date on which it is finally/irrevocably decided whether the competitor progresses or not. If the competitor on whom the option was purchased does not qualify for the specified round of competition, the option expires worthless and the owner of the option receives no compensation.

Muralidhar, col. 2 line 64 to col. 3 line 14:

Generally speaking, options represent the right to acquire or dispose a specified asset at a predetermined price within a defined time period. The predetermined price is referred to as the "strike price" and the date on which the option ceases to be effective is called its maturity/expiration date. These parameters, along with the current market value of the underlying asset, largely determine the value of the option. Other factors in the valuation are the volatility of the value of the underlying asset (a measure of the probability that the current value will be favorable vis-a-vis the strike price) and the interest rate (to quantify the carrying cost or the cost of financing the purchase). For a detailed discussion on options, see John Hull "Options, Futures and Other Derivative

Securities," Prentice Hall--Chapter 7. Alternative forms of options have included those that provide a pre-specified payoff when an event occurs during a defined time period.

Muralidhar, col. 4 lines 31-34:

And an additional object of the invention relates to the creation, marketing, trading and valuation of derivative financial instruments based on various attendance right options.

As evidenced by the above, Muralidhar does not disclose contract bundles paying off an aggregate fixed monetary sum at maturity, the aggregate fixed monetary sum known when the contract bundles are established.

Pursuant to MPEP §2143.03, "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. All words in a claim must be considered in judging the patentability of that claim against the prior art. If an independent claim is nonobvious under 35 U.S.C. 103(a), then any claim depending therefrom is nonobvious." (Internal citations omitted). Respectfully, the Examiner cannot satisfy this burden, because, among other things, all of the claim limitations of Applicants' independent claims are not taught or suggested by the prior art. Specifically, Muralidhar does not teach or suggest contract bundles paying off an aggregate fixed monetary sum at maturity, the aggregate fixed monetary sum known when the contract bundles are established. In light of the deficiencies of the Muralidhar reference, it would be incumbent upon the teachings of Shepherd or Slyke to overcome the failings of Muralidhar. However, neither Shepherd nor Slyke cures the deficiencies of Muralidhar.

Applicants' claims are patentable over Slyke. Slyke does not teach or suggest establishing a contract bundle paying off an aggregate fixed monetary sum at maturity. Instead, Slyke Paragraph Nos. 268-269 teach establishing an unbundled Liquid Insurance Contract ("LIC") that optionally may later be bundled with another already

established (and unbundled) LIC. Even if Slyke optionally bundles two already established LICs, this bundle will not pay off an aggregate fixed monetary sum at maturity, the aggregate fixed monetary sum at maturity known upon the formation of the contract bundle. Indeed, Slyke's abstract expressly states that (emphasis added): "A liquid insurance contract (LIC) comprises a security which is traded or tradable and which has cash flows to the issuer based upon a liability whose exact value is unknown at the time of issuance."

Further, Applicants' amended claims are patentable over Shepherd. Shepherd does not teach or suggest paying off an aggregate fixed monetary sum at the time of maturity. In relevant part, Shepherd col. 4, lines 18-21 states (emphasis added): "stakeholders can input contract data representing at least one offered contract in at least one predetermined phenomenon, each said phenomenon having a range of future outcomes."

Additionally, as independent claim 28 includes similar elements to those of independent claim 1, claim 28 is likewise patentable for at least the same reasons. Furthermore, as a dependent claim incorporates by reference all of the limitations of the claim from which it depends (see 35 U.S.C. § 112 ¶ 4), all of Applicants' dependent claims are allowable for at least the same reasons as the independent claim from which they depend.

Under MPEP § 2143.01 (III) (emphasis in original):

The mere fact that references can be combined or modified does not render the resultant combination obvious unless \*\*>the results would have been predictable to one of ordinary skill in the art. KSR International Co. v. Teleflex Inc., 550 U.S. \_\_\_, \_\_\_, 82 USPQ2d 1385, 1396 (2007) ("If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize

that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.""). Here, there is no evidence in the references or provided by the Examiner to show how the right to purchase event tickets of Muralidhar may be applied to Shepherd and Slyke to result in Applicants' claimed invention.

In response to the Applicants' arguments, and request to specify where in the Examiner's citations of Muralidhar that derivatives (contract bundles) paying off an aggregate fixed monetary sum at maturity, the aggregate fixed monetary sum known when the contract bundles are established are disclosed, the Examiner provides additional citations from Muralidhar for teaching "alternative forms of options [that] have included those that provide a pre-specified payoff when an event occurs during a defined time period .. options have been used for hedging the risk of changes in the value of the underlying asset or occurrence of event or for investment or speculation. col. 3 lines 11-23." Office Action, page 15 (emphasis in original).

Applicants respectfully point out that not all pre-specified payoffs are aggregate fixed monetary sums, the aggregate fixed monetary sum known when the contract bundles are established (as recited by Applicants' independent claims). This is evidenced by reading the Examiner's citation of Muralidhar col. 3, lines 11-23 (emphasis added):

Alternative forms of options have included those that provide a pre-specified payoff when an event occurs during a defined time period. These latter type of options are more in the nature of an insurance policy type of application than a true option. See, e.g., U.S. Pat. No. 4,766,539. [Examples of these are options on bonds that can be purchased by the owner of the option from the seller of the option, at a pre-specified price, should an earthquake occur in a specified area during a specified period of time.]

Options have been used for hedging the risk of changes in the value of the underlying asset or occurrence of event, or for investment and speculation.



Consider the example of an earthquake, as Muralidhar illustrates. If an earthquake happens during the defined time period, the option holder receives a pre-specified payoff of \$X. Here, the monetary sum that is paid off is \$X. If an earthquake does not happen during the defined time period, the option holder receives a pre-specified payoff of \$0. Here, the monetary sum that is paid off is \$0, and nobody receives \$X. In contrast, Applicants claim paying off an aggregate fixed monetary sum of  $\$0 + \$X = \$X$  in all cases (i.e. earthquake or no earthquake). Thus, not all pre-specified payoffs are aggregate fixed monetary sums, the aggregate fixed monetary sum known when the contract bundles are established (as recited by Applicants' independent claims).

Applicants appreciate that MPEP § 2123 stands for the proposition that, "[t]he use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." Applicants also appreciate that, "[a] reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments," and Applicants further appreciate that MPEP § 2111 stands for the proposition that, "[d]uring patent examination, the pending claims must be 'given their broadest reasonable interpretation consistent with the specification.'" Nevertheless, one having ordinary skill in the art, viewing the entirety of the Muralidhar reference, while also giving Applicants' independent claims their broadest reasonable interpretation consistent with Applicants' specification (as illustrated herein), cannot equate Muralidhar's pre-specified payoffs with Applicants' aggregate fixed monetary sums, the aggregate fixed monetary sum known when the contract bundles are established (as recited by Applicants' independent claims).

To the extent the Examiner believes that Applicants' aggregate fixed monetary sum, the aggregate fixed monetary sum known when the contract bundles are established (as recited by Applicants' independent claims) are inherently described by Muralidhar, the Examiner is respectfully reminded that under MPEP §2112 (emphasis added):

To establish inherency, the extrinsic evidence **must** make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. **Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.**

Thus, for Muralidhar to inherently describe Applicants' aggregate fixed monetary sum, the aggregate fixed monetary sum known when the contract bundles are established, Muralidhar must make clear that this is necessarily present in Muralidhar's pre-specified payoff. As already explained herein (i.e. the earthquake example), it is not. As independent claim 28 includes similar elements to those of independent claim 1, claim 28 is likewise patentable for at least the same reasons. Furthermore, as a dependent claim incorporates by reference all of the limitations of the claim from which it depends (see 35 U.S.C. § 112 ¶ 4), all of Applicants' dependent claims are allowable for at least the same reasons as the independent claim from which they depend.

The Examiner also cites Muralidhar for disclosing, "Further, analytic algorithms and code modules can be run against this warehouse data for the purpose of generating financial derivative instruments on the listed options; and indices and probabilities to quantify the odds of the various competitors reaching the different levels of competition can be generated. col. 9 lines 45-50." Office Action, page 15 (emphasis in original).

Applicants again respectfully point out that not all derivative instruments on listed options include Applicants' paying off an aggregate fixed monetary sum, the aggregate fixed monetary sum known when the contract bundles are established. One

having ordinary skill in the art, viewing the entirety of the Muralidhar reference, while also giving Applicants' independent claims their broadest reasonable interpretation consistent with Applicants' specification (as illustrated herein), cannot equate Muralidhar's derivative instruments on listed options with Applicants' paying off an aggregate fixed monetary sum, the aggregate fixed monetary sum known when the contract bundles are established. For Muralidhar to inherently describe Applicants' paying off an aggregate fixed monetary sum, the aggregate fixed monetary sum known when the contract bundles are established, Muralidhar must make clear that this is necessarily present in Muralidhar's derivative instruments on listed options. It is not. As independent claim 28 includes similar elements to those of independent claim 1, claim 28 is likewise patentable for at least the same reasons. Furthermore, as a dependent claim incorporates by reference all of the limitations of the claim from which it depends (see 35 U.S.C. § 112 ¶ 4), all of Applicants' dependent claims are allowable for at least the same reasons as the independent claim from which they depend.

## CONCLUSION

Applicants believe the rejections should be withdrawn and the application should be allowed.

If the Examiner has questions regarding the case, the Examiner is invited to contact Applicants' undersigned representative at the number given below.

Respectfully submitted,  
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